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10/575,935

08/14/2007

Carl Frederick Wilhelm Supra

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11/15/2010

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SUITE 900

WASHINGTON, DC 20004-2128

EXAMINER

KARLS, SHAY LYNN

ART UNIT

PAPER NUMBER

3723

MAIL DATE

DELIVERY MODE

11/15/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/575,935

Applicant(s)

SUPRA, CARL FREDERICK  
WILHELM

Examiner

Shay L. Karls

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4/14/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/6/06</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

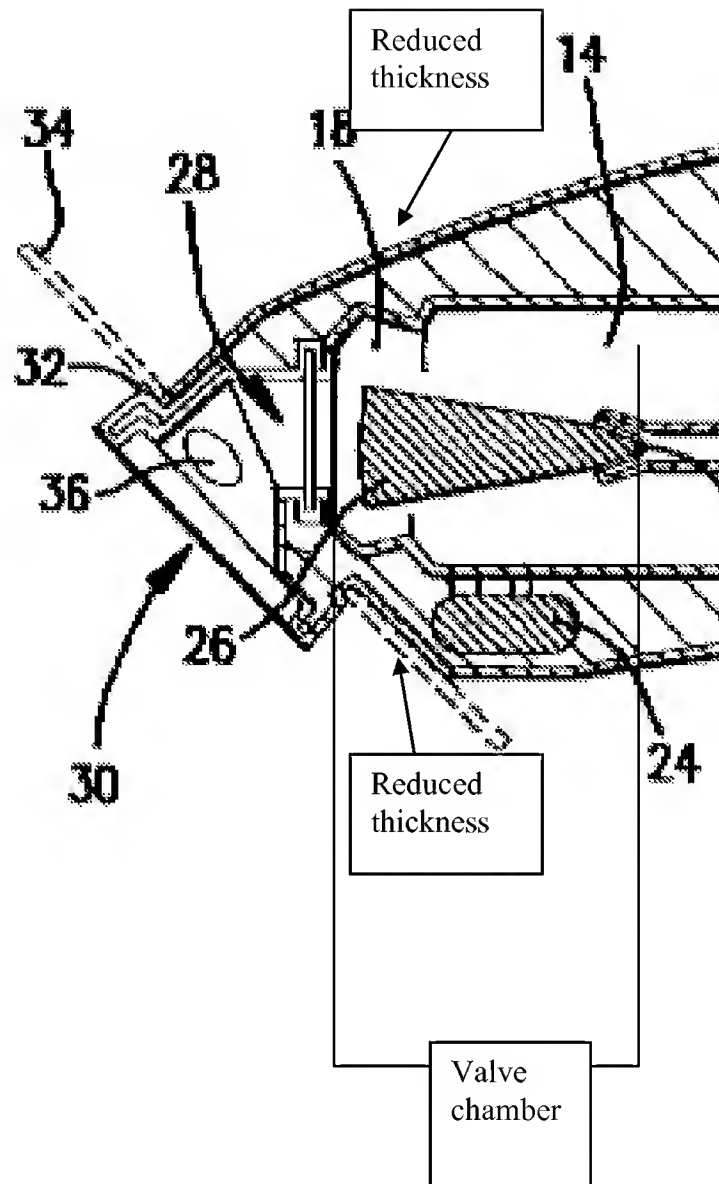
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-9, 14 and 15 rejected under 35 U.S.C. 102(b) as being anticipated by Supra (USPN 5970557).

Supra teaches a swimming pool cleaner comprising an injection molded cleaner head (12) having a valve chamber (from top of hammer to bottom of 18) formed by valve chamber walls. There is an inlet to the valve chamber (30) and an outlet to the valve chamber (20). There is a hammer (26) arranged to oscillate in the valve chamber, under the influence of suction flow through the valve chamber from the inlet to the outlet. The opposite faces of the hammer alternately contact internal surfaces of opposing valve chamber walls to control the flow of liquid through the cleaner head. The contact surfaces of the chamber walls have a reduced thickness compared to the other regions of the valve chamber walls (see figure below). The thicker regions are formed with internal cavities (22) to provide buoyancy.

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With regards to claim 3, there is a tubular structure (14/16) molded separately from the cleaner head and includes outlet passages which extend from the valve chamber outlet in a side by side relationship (col. 3, lines 32-38).

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With regards to claim 4, the tubular structure is connected in a sealed manner to the cleaning head.

With regards to claim 5, the tubular structure has an operatively lower or upstream end which is press fitted to the valve chamber outlet.

With regards claim 6, the passages (14/16) are separated from one another by a dividing wall (figure 1a) forming an integral part of the tubular structure.

With regards to claim 7, the lower end of the dividing wall is received in a clevis provided by a retaining member (82) of the cleaner head.

With regards to claim 8, the tubular structure includes an external fin (22) formed during molding with cavities to provide buoyancy.

With regards to claim 9, there is a ballast weight (24) attached externally to the valve chamber.

With regards to claim 14, the passages have a polygonal cross sectional shape (figure 6).

With regards to claim 15, the passages have an oval or elliptical cross section (figure 5).

With regards to claim 16, the regions of the valve chamber wall that are reduced in thickness are so reduced by virtue of localized indentations in the external surfaces of the opposing valve chamber walls (figure 1a).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Supra ('557).**

Supra teaches all the essential elements of the claimed invention however fails to teach that the cleaning head is injection molded using a blowing agent which creates the cavities in the chamber walls. This is considered a product by process claim and even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. Once a product appearing to be substantially identical is found and a rejection is made, the burden shifts to the applicant to show an unobvious difference between the claimed product and the prior art product.

**Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Supra ('557) in view of Campbell et al. (USPN 6625833).**

Supra teaches all the essential elements of the claimed invention however fails to teach a bumper strip. Campbell teaches a swimming pool cleaning comprising a bumper strip (22; figure 2) having an operatively upper end engaged with a retaining formation on the exterior

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tubular structure (col. 7, lines 33-35) (claim 10). The bumper has a curved rim and a central hub (100; figure 2) which is attached to the tubular structure so that the curved rim is spaced from the tubular structure (claim 11). The hub is clipped to the tubular structure (col. 7, lines 33-35) (claim 12) and the tubular structure includes an elongated recess on opposite sides into which the hub is clipped (col. 7, lines 33-35) (claim 13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pool cleaner of Supra so that it comprises a bumper strip as taught by Campbell, wherein the bumper strip would have an upper end attached to the top of the tubular structure and the lower end will be attached near the ballast weight. The bumper strip of Campbell will help to direct and guide the cleaner when coming in contact with walls. The cleaner will make contact with a wall and the bumper will push the cleaner off the wall and back to the middle of the pool.

**Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Supra ('557) in view of Hoffinger (USPN 5794293).**

Supra teaches all the essential elements of the claimed invention however fails to teach that the valve chamber inlet is provided by an opening in a cover which is outwardly convex relative to the valve chamber. Hoffinger teaches a pool cleaning comprising a valve chamber with an inlet provided by an opening (156) in a cover which is outwardly convex (figure 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the valve chamber inlet of Supra so that it comprises a cover with an opening to help control the flow of debris thru the cleaner to the tubular member.

### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Karls whose telephone number is 571-272-1268. The examiner can normally be reached on 6:30-5:00 M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shay L Karls/  
Primary Examiner, Art Unit 3723